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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/588,533	06/07/2000	Cheng-Yin Lee	1960.123	9204

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EXAMINER	
NGUYEN, TOAN D	

ART UNIT	PAPER NUMBER
2665	9

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/588,533	LEE ET AL.	
	Examiner	Art Unit	
	Toan D Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1* is/are allowed.

6)☒ Claim(s) *2-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5, 8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the specification is amended too much.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and (c).

2. The interlineations or cancellations made in the specification or amendments to the claims could lead to confusion and mistake during the issue and printing processes. Accordingly, the portion of the specification or claims as identified below is required to be rewritten before passing the case to issue. See 37 CFR 1.125 and MPEP § 608.01(q).

Claim Objections

3. Claim 1 is objected to because of the following informalities:

In claim 1 lines 3, 12, 14, 15, 16 and 18, "(LAR)" should be "LSR".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 2-8 and 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Armitage et al. (U.S. Patent 6,374,303 B1).

For claim 2, Armitage et al. disclose explicit route and multicast tree setup using label distribution, comprising the steps of:

a) receiving a label binding message at said node, said label binding including a label and a forwarding equivalency class (FEC) (figures 3 and 4, col. 2 line 63 to col. 3 line 20);

b) if a label mapping request for the same FEC was not previously received at said node, sending a label splicing message (Lsm) towards the root of said MPLS tree along a labeled path (figure 4, col. 3 lines 17-33 and col. 9 lines 58-61);

c) generating a splice acknowledgement message (ACK) by said root node in response to said Lsm (col. 9 lines 58-61);

d) declaring loop-free and accepting said binding if said node is not waiting for a previous ACK corresponding to a previously received Lsm and said ACK returns to said node on the same said labelled path (col. 1 lines 31-35 and col. 2 lines 45-54); and

e) informing all member nodes said subtree was grafted to said MPLS tree (col. 2 lines 45-54).

For claim 3, Armitage et al. disclose wherein said MPLS tree comprises a unidirectional shared tree (col. 14 line 30).

For claim 4, Armitage et al. disclose wherein said root of said unidirectional shared tree comprises an ingress node of said unidirectional shared tree if the core node is not included in said unidirectional shared tree (figure 19, col. 14 lines 29-41).

For claim 5, Armitage et al. disclose wherein said MPLS tree comprises a source tree (col. 3 lines 8-15).

For claim 6, Armitage et al. disclose wherein said root of said source tree comprises an ingress node of said -source tree (col. 3 lines 8-15).

For claim 7, Armitage et al. disclose wherein said MPLS tree comprises a bidirectional shared tree (col. 3 lines 8-15).

For claim 8, Armitage et al. disclose wherein said root of said bidirectional shared tree comprises the node closest to the core if said core node is not included in said bidirectional shared tree (col. 2 lines 21-54).

For claim 11, Armitage et al. disclose wherein, whenever there is a label mapping request for same said FEC at said node, the following substeps are performed after step (a): merging label mapping requests (col. 3 lines 17-23); and stop forwarding said Lsm (col. 4 lines 7-20).

For claim 12, Armitage et al. disclose wherein, if said ACK is not received back by said node while said node is waiting to receive said previous ACK, terminating grafting procedures after performing step (c) (col. 2 lines 45-60 and col. 4 lines 7-20).

For claim 13, Armitage et al. disclose wherein, if said ACK is not received back by said node and said node is not waiting to receive said previous ACK, forwarding said Lsm after performing step (c) (col. 2 lines 45-60 and col. 4 lines 7-20).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armitage et al. (U.S. Patent 6,374,303 B1) in view of Anderson et al. (U.S. Patent 6,236,657 B1).

For claim 9, Armitage et al. do not disclose wherein said MPLS tree comprises a multipoint to point tree. In an analogous art, Anderson et al. disclose a multipoint to point tree (col. 2 line 3). Anderson et al. further disclose a point to multipoint tree (col. 2 line 2 as set forth in claim 10). One skilled in the art would have recognized a multipoint to point tree to use the teachings of Anderson et al. in the system of Armitage et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the multipoint to point tree as taught by Anderson et al. in Armitage et al.'s with the motivation being to provide a method for releasing connection in such manner that a connection, along which the same information is transmitted to several subscribers simultaneously, is not released until the last of said subscribers oders disconnection of the distributed service (col. 2 lines 1-7).

Allowable Subject Matter

8. Claim 1 is allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding to claim 1, the prior art fails to teach a combination of the steps of:

a) obtaining at a label, switching router (LAR) a label mapping for a forwarding equivalence class (FEC);

b) determining if previous bindings exist for said FEC;

c) determining if said joining node is at single node or a parent node of a subtree;

d) accepting the mapping for said single node if no previous bindings exist; and

if said previous bindings exist when said subtree is attached to said MPLS tree:

e) sending a label splice message (Lsm) from said LAR to a root-node on a label switched path and returning a label splice message acknowledgment (ACK) to said LAR, and:

f) accepting the mapping after receiving said ACK at said LAR;

g) terminating any further action if said LAR is waiting for a previous ACK message;

h) forwarding said Lsm to the next LAIR if said LAR is not waiting for said previous ACK message, in the specific combination as recited in the claim.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

T.N.

STEVEN H.D NGUYEN
PRIMARY EXAMINER